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Edil REPORTS *Hym*⁴

PRINCIPALLY

CONCERNING THE EFFECTS

OF THE

NITROUS ACID

IN THE

VENEREAL DISEASE,

BY THE

SURGEONS of the ROYAL HOSPITAL at Plymouth,

AND

BY OTHER PRACTITIONERS.

PUBLISHED BY

THOMAS BEDDOES, M. D.

BRISTOL,

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1797.



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ERRATA.

PAGE 5. For *uncias* read *unciam*, and correct a few such
literals, as the printers speak.



REPORTS *of the* EFFECTS

OF THE

NITROUS ACID

IN THE VENEREAL DISEASE.

*Letter from Mr. HAMMICK, Junr. to
Dr. Beddoes.*

Royal-Hospital, Plymouth, July 22, 1797.

SIR,

I do myself the honour of acquainting you, that in consequence of your very ingenious publication on Factitious Airs, (Parts IV. and V.) and your recommendation of the Nitric Acid in Syphilis, I have been induced to make trial of this medicine in that disorder, under the inspection of my friend Dr. Geach, who is the senior Surgeon of this Hospital ; and to him I beg to refer for a confirmation of the faithful statement of the several cases, and the authenticity of the facts. Further, Dr. Geach has been so obliging

A

as to say, that he will readily answer, as far as he can, any questions relative to this subject.

As I am one of the Assistant Surgeons under him, and many of the venereal wards are in our department, I had an opportunity of selecting the *worst* venereal cases that were brought into the Royal Hospital. The cases, in which the Nitric Acid has been given, already amount to more than fifty in number; and the success has fully answered the character which has been given of this newly discovered remedy, which effects a cure, for the most part, in a short time, without impairing the appetite, without requiring any precise or particular regimen or strict confinement, leaving none of those ill consequences, or depredations, that often follow the liberal use of mercury. The Nitric Acid does not affect the gums, fauces, stomach, or intestines, by exciting vomiting, diarrhoea, or pain, unless the medicine be swallowed hastily, and in large draughts at a time; when thus taken, I have known that it has produced a nausea, or mawkish disagreeable sensation in the stomach, and



set the teeth on edge by its acidity; all which inconveniences have been prevented, by enjoining the patient to drink the medicine through a narrow glass tube.

Not to multiply instances, and tire you with a long detail, I beg to submit to your inspection and consideration Twelve Cases, with a request that you will be pleased to publish them, as they corroborate your own observation: and the publication, under your authority, may extend the use of the nitric acid in a disease, so ravaging, that few constitutions can withstand the power of two poisons, the disease and mercury, operating at the same time. Future experience, however, must determine whether the cures wrought by nitric acid, will be permanent or not; but if it be permitted to draw conclusions from the progress of the several ulcers; the healthy appearance and firmness of the granulations; the softness of the parts, and of the cicatrices, little doubt can be entertained but that the nitric acid will, in a great measure, supersede the use of mercury in the venereal

(4)

disease; and, as yet I have seen no instances of the disorder re-appearing after the use of this medicine.

I have the honor to be, Sir,

Es. Es.

STEPHEN HAMMICK, Junr.

CASE I.

GEORGE HALL, a Marine, thirty-nine years of age, was received into the Royal Hospital at Plymouth, on the seventeenth day of April, 1797, for a venereal complaint which he had contracted about three weeks before; at this time he had a large, irregular, foul chancre on the lower part of the penis near the scrotum, with an enlargement in the right groin; had never taken any medicine, or applied any thing to the chancre itself: the next day, the 18th of April, he was ordered the following drink:

R

Acidi nitrosi diluti drachmas ij.

Succi limonis uncias i.

Aquæ fontanæ libras ii.

M. bibat quotidie

The ulcer was dressed with the simple white ointment : he continued his drink daily to the third of May, when the diluted nitric acid was changed for the same quantity undiluted, which he took, with the addition of syrup, till the 11th day of May ; when his chancre was healed, the enlargement in his groin could not be felt, and in every respect he became well ; he was discharged to quarters on that day to go on duty.

N. B. This man never took a grain of mercury.

CASE II.

THOMAS HOMEWOOD, Seaman, twenty-six years of age, was received into this Hospital on the twenty-ninth day of March, 1797, for a venereal complaint which he had contracted about a month before. He had taken different medicines without effect, for it, on board ; the appearance of the disease, was, a very large

and deep chancre, extending all the length of the penis on the back part; a large and extremely inflamed bubo in each groin, with a profuse discharge of matter from the urethra, accompanied with great heat in passing his urine. His buboes were ordered to be fomented and poulticed twice a day, and two drachms of the strong mercurial ointment to be well rubbed in on the thighs at night; which applications were continued to the 2d. of April, when his buboes (now ready to suppurate) were touched with the lapis infernalis, and the eschars were thrown off on the 5th. The next night he used the friction again, and continued it to the 10th, when I found him very weak and low, with a violent cough and much expectoration of thick phlegm streaked with blood, profuse sweats, and such extreme debility, as not to be able to raise himself from his pillow, attended with diarrhœa. The chancre and buboes continuing at the same time very foul, the friction was discontinued, and he was the next day ordered the following drink :

R

Acidi nitrosi drachmas ij.

Syrupi simplicis uncias viii.

Aquæ fontanæ libras ij.

M. Capiat quotidie.

The day after, finding himself somewhat better, the drink was continued, and from the above alarming symptoms yielding, and an entire alteration taking place both in his health and appearance of the ulcers, he took it to the 10th of May, when he complained the drink vomited him. The nitric acid was then reduced to one drachm daily, which he drank without any uneasy sensation in his stomach, and continued it in that proportion to the 30th day of May; when his buboes and chancre being healed, and all his venereal complaints entirely gone, the drink was no longer used, and he was discharged from the Royal Hospital on the 5th day of June, in order to join his ship.

CASE III.

WILLIAM FRANKLIN, Seaman, thirty-six years of age, was received into this Hospital on the 28th day of May, 1797, for a venereal complaint, which he said, had made its appearance two months before; for which he had taken a good deal of mercurial medicines on board, without the least effect: in fact, he was now, he said, worse than at any former period. On examining him, I found a bubo which had suppurated some time, and appeared to be in a spreading state; chancres on the penis; excoriations and ulcers extended to the scrotum and round the anus, which gave him such intense pain, as to oblige him to keep his bed, only getting out once a day in order to have it made. He was ordered the following drink:

R

Acidi nitrosi drachm. i fs.
Syrupi simplicis uncias viii.
Decocti lignorum libras ij.
M. bibat quotidie.

The excoriated parts were kept clean. He took this drink to the twenty-second day of June, when his bubo, chancres, and excoriations being healed, and finding himself in all respects well, he was discharged that day from the Royal Hospital in order to join his ship.

CASE IV.

JOHN WILLIAMS, a Marine, twenty-four years of age, was received into this Hospital, on the 1st day of May, 1797, for a venereal complaint, which he had contracted ten days before. He had now enlargements of the glands in each groin, and a chancre on the prepuce: had never taken any medicine, or made any application to it; the swelling in his right groin was the size of an egg, and the other in his left, somewhat smaller. He was ordered that day the following drink:

R

Acidi nitrosi drachmas ij.

Syrupi simplicis uncias viii.

Aquæ fontanæ libras ij.

M. bibat quotide.

He was strictly forbidden to apply any thing to the groins : he took the nitric drink that day, and continued it in the same proportion daily to the 8th day of June, when the indurations were entirely dispersed (not even the smallest hardness to be felt) and the chancre healed. He was discharged that day, viz. the 8th day of June, to go to quarters.

N. B. This man had not taken any mercury.

CASE V.

THOMAS M'GRATH, Seaman, twenty-six years of age, was received into this Hospital on the 18th day of May, 1797, for a venereal complaint, which he had contracted about a fortnight before. He had now a large and deep ulcer on the scrotum, with much discharge and inflammation ; a pain and slight swelling in the right testicle, and a swelling in his groin :

had not taken any medicine for it; the next day he was ordered the following drink;

R

Acidi nitrosi drachmas ij.

Syrupi simplicis uncias viii.

Decocti lignorum libras ij.

M. bibat quotidie.

The ulcer was dressed with the ung. simpl. He took the drink as ordered, and continued it in that proportion daily to the 15th of June, when his ulcer was healed, the swelling in his groin and testicle gone, and all his venereal complaints, he was discharged on the 15th day of June, from this Hospital, in order to join his ship.

N. B. This man had not used mercury.

CASE VI.

THOMAS PLANGETT, Marine, twenty years of age, was received into the Royal Hospital on the 17th day of April, 1797, for a venereal complaint, which he had contracted

about sixteen days before ; had not used any medicine for it : he had now two large indurated glands in the right, and a larger one still in the left groin, and a venereal eruption on the Pubis. The following day he was ordered :

R

Acidi nitrosi drachmas i fs.

Syrupi simplici uncias vi.

Aquæ fontanæ libras ij.

M. bibat quotidie.

He took it that day and continued it in the same proportion daily to the 15th day of June, when the swellings in his groins being gone, and the eruption having entirely disappeared, he was discharged on that day, in order to go to quarters.

N. B. This man had not used any mercurial preparation.

CASE VII.

JOHN BURR, Seaman, twenty-seven years of age, was received into this Hospital, on the

5th day of June, 1797, for a venereal complaint, contracted about a month before ; this man had not taken any thing for it. Its appearance at this time was a large bubo in the right groin, which had suppurated two days before ; two chancres appeared on the lower part of the penis ; he had phymosis with great inflammation, and an appearance tending to gangrene ; and an ulcer on the scrotum : the same day he was ordered the following drink :

R

Acidi nitrosi drachmas ij
Syrupi simplicis uncias viii.
Decocti lignorum libras ij.
M. capiat quotidie.

The penis and bubo were poulticed, and the chancres dressed with the simple white ointment. He took his drink that night, and before he had taken it six days, there was an apparent alteration for the better. He continued it to the 10th day of July, when his bubo, chancres, &c. being healed ; the phymosis entirely removed, and the man in perfect health, he was

ordered from the venereal ward, to another surgical ward, as he had a hernia.

N. B. This man had never used mercury.

C A S E VIII.

WILLIAM SMITH, a Marine, twenty-two years of age, was received into this Hospital on the 26th day of May, for a venereal complaint ; an extremely large and painful node was discovered on the right tibia, which he said he had perceived coming on nearly four months : he had suffered excruciating pains in that part and in his limbs at night, which became much easier as the morning advanced ; he contracted this disease four years since, but thought himself perfectly cured, but had pains in his limbs ever since the commencement of the disease, at times : but not so violent as to prevent him from doing his duty, till a month since. He was much emaciated, and low spirited from the constant pain he suffered : he was ordered the following drink :

R

Acidi nitrosi drachmas iſs
 Syrup : ſimplicis uncias vi
 Aquæ fontanæ libras ij
 M. bibat quotidie.

At the expiration of nine days, he ſaid he had reſted better than for five months paſt : on the 16th day of taking the nitric medicine, his pains had entirely left him, and his node ſcemed diminiſhed ; his appetite returning, and in much better ſpirits. He continued his drink to the fourteenth day of July, when his pains and ſwelling on the tibia were gone, his appetite and ſpirits good, and his health reſtored. He was diſcharged on that day, to go on duty, returning many thanks for his cure.

CASE IX.

THOMAS EDMED, Seaman, aged twenty-four, was received into this Hoſpital on the 9th day of February, 1797, for a venereal complaint contracted about three weeks before, and

had taken Mercury on board for it. At this time he had a very bad phymosis: the prepuce being very thick and hard with a profuse discharge appearing to come from chancres situated behind the glans penis; he had also great difficulty in passing his urine, accompanied with a chordee. This man was very delicate with fair complexion; he was ordered the next day to rub well into his thighs at night, two drachms of the strong mercurial ointment, and to apply twice a day, a poultice of lintseed meal &c. to the penis: he rubbed between the 10th of February and 12th of March, twenty-three times, and fumigated the part night and morning with the cinnab: factit. On this day, viz. 12th of March, he was ordered to forbear the friction, as he was low and weak, and his mouth very sore and swollen; he spat in the four and twenty hours, nearly three pints; diarrhoea, cough, pain of breast, and his venereal complaint appeared much aggravated. He was put on a nutritive diet, with wine and cordials: he was ordered an infusion of bark in lime-water;

two grains of opium every six hours, and a quart of the decoction of woods, to be taken daily. He was kept on that course without gaining ground in any respect, to the 12th day April: he was ordered then mercurials in small doses, combined in different forms; various fumigations and poultices without the least success, until the 14th day of May, when he complained of his being a great deal worse; so weak that he could not quit his bed, or only be helped out to have it made once a day; his diarrhœa still continued, his cough and sweats increased, his appetite was entirely gone; he had nausea, excruciating pains in his legs and arms at night, and was exceedingly reduced: in this state he was ordered to leave off his bark, decoction of woods, opiates &c. and to trust entirely to the following drink:

Acidi nitrosi drachmam iſs.
 Syrupi ſimplicis uncias viii.
 Aquæ fontanæ libras ij.
 M. bibat quotidie.

Before he had taken this nitric medicine twelve days, he thought his pains were leſs ſevere, and

his diarrhœa somewhat abated : on the seventeenth day, the venereal complaint appeared better ; he could get the prepuce a little way back, and he thought himself in every respect better. On the twenty-sixth day of taking this drink, he was able to walk about his ward with some assistance, and on the 16th day of June, could get the prepuce entirely back over the glans penis. He continued his nitric drink to the 10th of July, when his venereal complaint was entirely well : diarrhœa, pains, cough, and sweats had left him ; his appetite good, and grown plump and strong, he was discharged that day at his own desire, to join his ship.

CASE X.

MURTY LAWLER, a Seaman, thirty years of age, was received into this Hospital on the 1st day of June, 1797, for a venereal complaint which he had contracted about three weeks before ; when it made its appearance by a small chancre on the glans penis, which con-

tinued to spread notwithstanding he had taken medicine for it on board. He informed me that three days before his arrival here, he perceived a black spot on the right side of the glans penis; on the 1st day of June, (the day of his coming here) there was a large and deep sphacelus on the glans penis, paraphymosis, great inflammation, on the penis, and a large deep chancre on its lower part close to the scrotum, which he said, had bled much; indeed, the *whole penis* had an appearance tending to gangrene; he was ordered to be fomented twice a day, with flannels wrung out of a decoction of chamomile flowers and poppy heads, then to apply the yeast poultice, and take the following drink daily:

R

Acidi nitrosi drachmas ij.

Syrupi simplicis uncias viii.

Aquæ fontanæ libras ij

M. bibat quotidie.

R

Opii grana ij.

Sumat horâ somni.

The next day, viz. the 2d, he had slept but little, and the sphacelation had spread; the drink, opiate, &c. ordered as yesterday. The 3d, still worse; drink, &c. continued. 4th, the sphacelus did not appear to have spread; drink, &c. continued. 5th, the sphacelus had some marks of separation; there was a bleeding during the night, from the chancre on the lower part of the penis; drink, &c. continued. 6th, better; drink, &c. ordered as usual. 7th, the eschar came away this morning in the poultice, by which nearly half of the glans penis was destroyed; nitric medicine, &c. as before, and continued to the 13th, when the poultice was changed for a dressing of the unguentum simplex, (*i. e.* unguent: adipis suillæ) and the drink was taken daily in the same proportion, to the 10th of July, when being perfectly well in every respect, he was discharged at his own request, to join his ship.

CASE

C A S E X I.

THOMAS CHISWICK, Seaman, twenty-eight years of age, was received into this Hospital on the 17th day of June, 1797, for a venereal complaint, which he had contracted about ten days before. He had never taken any medicine for it : he had now chancres on the glans penis ; paraphymosis, and a large swelling in the right groin ; he was ordered the day after, the following drink :

℞

Acidi nitrosi drachmam i ss.

Syrupi simplici uncias vi.

Aquæ fontanæ libras ij.

M. Capiat quotidie.

He took it that day, and continued his nitric medicine, in the same proportion, to the 17th day of July, when his chancres were perfectly cured, paraphymosis and enlargement in his groin gone, he was discharged at his own desire, to join his ship that day.

N. B. This man never took any mercurial medicine.

CASE XII.

SAMUEL POPE, Seaman, twenty years of age, was received into this Hospital, on the 4th day of June, 1797, for a venereal complaint, which he had contracted about ten days before. The account he gave me was, that about six days before his arrival here, he found great pain and difficulty in passing his urine, attended with a phymosis, and a discharge of matter from the urethra ; that three days after that, he perceived a black spot on the prepuce, which continued spreading to the day of his arrival here, when a profuse hæmorrhage taking place from the dorsum penis, it alarmed him, and he then applied to his surgeon for the first time, who immediately sent him here. I found the whole prepuce entirely mortified, and the mortification had seized the upper part of the glans penis, from whence the prepuce had, from its weight in hanging down, been detached ; he had also much symptomatic fever : he was ordered to be well fomented twice a day, and the

yeast poultice to be applied, and to take the following drink :

R

Acidi nitrosi drachmas ij
Syrupi simplicis uncias viii.
Decocti lignorum libras ij.
M. capiat quotidie.
Capiat hora somni opii grana ij.

5th, has bled somewhat during the night, and the sphacelus on the glans seemed to have spread; the nitric drink, &c. continued as yesterday. 6th, nearly the same as yesterday, only appears to have less fever; drink, &c. continued. 7th, the whole of the prepuce sloughed off this morning; the mortification on the glans had not spread: nitric medicine, &c. continued. 8th, there was a detachment of the sloughs, drink, &c. ordered as usual. 9th, the sloughs came entirely off this morning from the glans, so deep as to occasion some alarm that the urine would find its way out through the side of the urethra. 10th, appeared to be better, and the nitric drink, &c. was continued without any alteration (except the ulcer being dressed with oint-

ment on the 13th in lieu of poultice) to the 17th of July, when the wounds round the glans from whence the prepuce had sloughed off & elsewhere, were healed; and he being in all respects perfectly cured of the venereal disease, he was sent from the venereal ward to another surgical ward, as he had a lame arm from a hurt he had received on board some time before.

N. B. This man had never used either Mercury or the Bark.

To

To the preceding Letter of Mr. HAMMICK
I returned, by the earliest opportunity, an
answer to the following purport :

“ I shall lose no time in committing your
“ valuable communication to the press. Your
“ statement is clear, and I have hardly occasion
“ to avail myself of Dr. Geach’s obliging offer
“ of further elucidation. But doubtless you
“ will agree with me, that his additional testi-
“ mony will be a satisfaction to the public.

“ With you, the nitrous acid appears to cure
“ the venereal disease expeditiously and com-
“ pletly. The patient also, I perceive, comes
“ from the fullest use of the remedy with a
“ constitution so entire, that neither diet drinks
“ nor country air, are at all necessary.

“ I should be glad to know how often, in
“ your large experience, you have been dis-
“ appointed.

“ Do you observe any peculiar precautions
“ in the preparation of your acid ?

“ Do you take pains to ascertain its specific gravity ; or endeavour to bring it to any particular state of oxygenation ?

“ You observe, that the gums have never been rendered sore by this new treatment. Have you never remarked a degree of salivation without soreness ?

“ Do you think the acid stops the progress of the disorder as soon as mercury ?

I am, - - - - -

THOMAS BEDDOES.”

To these enquiries, I received a very satisfactory answer in the following letter from Dr. Geach.

Letter

Letter from Dr. Geach to Dr. Beddoes.

Royal Hospital, July 26, 1797.

Sir,

I Do myself the honor, agreeably to your request, of writing to you, and assuring you that the patients, whose cases Mr. Hammick Junior lately transmitted, were regularly attended by myself; and every circumstance was remarked as minutely as possible, and is strictly true. So great indeed has been the success of this nitric medicine in the venereal disorder, *that many patients, who had been broken down by an antecedent use of mercury, under which the disorder gained ground, recovered their health and strength without the assistance of diet drinks, change of air, the bark, or any other tonic medicine whatever.* We have had but few instances where the stomach and bowels have been affected by it; but the precaution of taking it thro' a narrow glass tube has prevented the *acid* from affecting the teeth, and the medicine has been

rendered more palatable by mixing simple syrup with it ; and this addition, as far as we have hitherto noticed, has been effectual enough to prevent both mawkishness and pain. But, although these circumstances have now and then succeeded the use of the nitrous acid, it does not affect the mouth or produce a ptyalism. It does not impair the appetite, it does not require any dietetic regimen, or confinement. Indurated buboes have yielded to it without suppurating ; *Phagedenic buboes have healed after unsuccessful trials with mercury : in chancres, however large, or sordid, and in excoriations of the scrotum, however fetid and extensive, the cure, by its use, goes on more rapidly than by a mercurial process.* Such chancres and excoriations have been dressed only with simple ointment, that the patients might not be incommoded by the friction of the linen, and that the effect of the medicine might be better ascertained, when there was no local application. We have not found, after the chancres have been cured by this medicine, that the throat has been affected ;

a circumstance not unusual, especially when such ulcers have been dressed with any mercurial preparation. *The cases sent by Mr. Hammick were the worst that were received into the Hospital.*

That the nitrous acid has succeeded in fifty cases, or more, is certain ;—but it has failed in four or five instances, and failed too, where the cases have been apparently slight. But whether the failure can be imputed to the inadequacy of the medicine, under particular or unobserved circumstances, or to causes not yet explored, I know not: future experience must throw more light on the efficacy of this medicine, which, at present, is only in its dawn. It has removed, in some patients, nocturnal pains. In the gonorrhæa itself it has been tried, as very bad cases only have particularly engaged our attention. In attending to those, we have endeavoured to bring every thing to the test of truth, which ought to be the guide to every man in a profession, which has for its object the restoration of health, and in a disorder, which

sometimes baffles the skill of the most experienced. Suffer me to own, that when we first made trial of the nitric acid, no great opinion was entertained of its success. Accustomed to give mercury in this disease, a practice sanctioned by great authorities and time, we were inclined to think that no medicine but mercury would cure it. There was no bias, no predilection therefore, for this new medicine, no attachment to system. But as the nitrous acid was so respectably recommended by yourself, this was a sufficient motive to make trial of it; and nothing but the success that has attended its use, could authorize us to write in this manner to you, who are the best entitled to the earliest communication.

The nitrous acid we have used, has been prepared according to the London College.

Before I close this letter, it will be doing but bare justice to Mr. Hammick, to say, that he has been unwearied in his attention to the cases in question, as indeed he is to every case in

which he is professionally engaged, and that his skill and integrity merit all the praise I can bestow.

I have the honor to be, Sir,

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FRA. GEACH.

BETWEEN the receipt of Mr. Hammick's first letter, and the printing of the preceding pages, I had received some additional information respecting the use of nitric acid in siphylis. This the reader will find below. I was also desirous to learn, whether, in the course of the three intervening weeks, any relapses had occurred to Mr. Hammick; thinking if they had repeatedly happened, one or more, among so many patients, would have returned to the Royal Hospital. I also desired the most particular information, as to the acid employed. My letter produced the following answer.

Royal Hospital, Plymouth. Aug. 14, 1797.

Sir,

PERMIT me to thank you for your late favor, and to mention, that since I did myself the honour of communicating to you the twelve cases, we have still continued to give the nitric

acid in the same disorder, and with equal success.

This medicine has been supplied by Mr. Fox, a very eminent chemist in Plymouth, and it has also been sent from Apothecaries' Hall ; but though thus differently obtained, the success has been the same ; and therefore time only can shew the reason, why, with other practitioners, your correspondents, this medicine has not been successful.

It is a great satisfaction to me, that the trials have been made in a public Hospital, under the immediate eye of Dr. Geach. The effect has been well known to many within the walls, and also without the walls of this Hospital. And in consequence of the observations made by us, some private practitioners have given this medicine, and can adduce instances of its good effect.

As my residence is in the Hospital, I had an opportunity of receiving and selecting the patients ; a short history of their cases was inserted in the prescription books ; the progress of the

several cases was minutely watched, and the effect of the medicine as much as possible ascertained.

If the patients under the nitric course had not been cured, they would not have been either discharged from the Hospital, or received into their ships: removed from our notice, we cannot as yet know whether their cures have been permanent or not.

With great respect, Sir,

I remain, &c. &c.

STEPHEN HAMMICK, Junr.

In a letter dated Aug. 22d. Mr. Hammick expresses his own and Dr. Geach's satisfaction on account of the coincidence of the observations of Mr. Cruikshank and others, with those made in the Royal Plymouth Hospital. He hopes the facts ascertained by distant and unconnected practitioners, will be effectual in recommending the nitrous acid to notice. He adds: "Permit me to mention, that it has been the practice for

more than 20 years, with Dr. Geach, to give 6 or 8 ounces of recent lemon juice, with an equal proportion of simple syrup, daily, to patients worn down with the venereal disease, and particularly in phagedenic buboes, which had spread under a course of mercury ; and for the last four years and upwards, since I had the happiness of acting under him in this Hospital, I have seen the good effects of the lemon juice in such cases. Dr. Geach candidly owns, that the utility of lemon juice was first suggested to him by the late Sir William Fordyce, who had seen, in long and extensive practice, its good effects. Although the Lemon Juice thus succeeded with Sir William Fordyce, and with us in this Hospital, yet the cures have not been so rapid, nor its success equal to that of the nitrous acid."

" I embrace the first moment after reading Dr. Rollo's book, to send this Letter, which, I hope will reach you early enough for publication."

STEPHEN HAMMICK, Junr.

Letter from Mr. SANDFORD, Surgeon.

WORCESTER, Aug. 21, 1797.

Dear Sir,

IF you should be of opinion that Medical Practitioners will be induced by the perusal of the following imperfect outlines, (for the cases cannot be filed otherwise) to make further experiments, I shall be very happy. The very valuable communications you have received, will, I have no doubt, prove of real importance in the science of medicine: and under such circumstances, some of the following facts may possibly be regarded as bearing a share in evidence of the beneficial effects of this acid.

Finding from the accounts of Mr. Scott of Bombay, published in your 5th part of "Considerations on factitious airs," that the nitric acid exhibited in the manner he there directs, conveyed oxygen to the system, in a less operose method than by the preparation of this gas from manganese, &c. my intentions were princi-

pally directed to administer it in all those cases that fell under my care, where this remedy seemed likely to prove beneficial ; or in other words, where oxygen *had* been found serviceable, or where it seemed indicated.

From amongst the numerous trials that I have made, the following cases are selected, as most conclusive of its effects. I have related the only unsuccessful case I have met with, because I think it would be unjust to the impartial enquirer, to mention *only* the successful cases in which this medicine has been had recourse to.

The preparation I made use of in all the cases here mentioned, was the *nitrous acid* deprived of its phlogiston (as it is called) by simple boiling in an open retort, till the red fumes ceased.

CASE I.

I. F. aged 24, by trade a weaver, was admitted an in-patient in the Worcester Infirmary, March 4th, 1797. He had been subject to what had been called Fistulas in Ano, for up-

wards of three years. Upon examination, two *very* small orifices were discernable on the nates, very near the perinæum, but too small to admit a common sized probe. A whitish opaque fluid was discharged from them, and the parts surrounding seemed hard and callous. As, from his own confession, there was some reason to suspect a syphilitic affection, as he had no cough, and was in every respect languid and debilitated, I wished to make trial of the *nitric acid*, with an intention of conquering the syphilitic affection, as well as invigorating the system. He began with 3j. mixed in a quart of water, the whole of which was directed to be taken within the course of twenty-four hours, and the fistulous orifices were dressed with mercurial ointment. In the course of a week he found himself much better, his appetite increased, and to use his own expression, "he thought he felt flouter." The quantity was now increased to 3iss. and at the end of another week to 3ij. to be taken within the same space of time. The orifices still continuing to secrete a small quan-

tity of matter, the mercurial dressing was now laid aside, and he was directed to use a fomentation of vinegar and water to the parts twice a day, and to keep soft cloths wet with this liquid, constantly applied to them. In a short time the discharge ceased entirely, the orifices healed, the callosity disappeared, and the man found himself perfectly well. Before he quitted the Infirmary, he omitted his medicine for a fortnight, without any of his symptoms returning, or experiencing any relapse in his general health. He was therefore discharged completely cured, April 29th.

CASE II.

J. W. aged 45, had, in the early part of his life, been a soldier; and during an engagement, had been wounded in the perinæum, neck of the bladder, rectum, &c. Since which time, he has never been quite well; the parts have been imperfectly healed, and he has been afflicted with variety of complaints; some of which appear to have been increased, if not produced, by a

habit of inebriety, to which he acknowledges he has been subject. He was received into the Infirmary for an ill-conditioned ulcer of the Leg, accompanied with erisipelas of the scrotum, and anasarcaous swellings of the whole body ; but particularly of the lower extremities : he had many other symptoms of general debility.

I esteemed this a fair case to make trial of the powers of nitric acid. But though I began with a small dose, it evidently disagreed with him. I then gave him two or three doses of squills and digitalis. These increased the flow of his urine, and in some degree abated the anasarcaous swellings. I then again made trial of the nitric acid ; it produced the same unpleasant effects as before, together with heartburn, cholic, flatulancy, &c. though joined with an aromatic tincture. I was therefore obliged to lay it aside a second time, though not before it had affected his gums with soreness, and produced a slight salivation. (This and one other are the only patients to whom it has been given, that have been so affected by it.) The poor man was now

made an out patient, and still continues to drag out a miserable existence, which is merely rendered tolerable by occasional doses of opium.

C A S E III.

Though the last mentioned patient was not benefited by the nitric acid, the subject of the following experienced greater and more decided good effects from it, than any patient I ever administered it to.

On the 25th of March, R. H. aged 22, a farmer's labourer, was sent to the Worcester Infirmary with a lumbar abscess, that for some weeks past had suppurated, and discharged itself through a small opening above poupart's ligament in the right groin: the thigh on that side was considerably enlarged, inflamed, and painful on pressure; he could not bear to be supported on horseback, and was therefore sent in a cart. Upon his admission, I thought his case so hopeless, and fearful that little could be done to benefit him by medicine or surgery, I was only anxious to have him sent back into the

country as soon as possible, being apprehensive that confinement in the Hospital would only hasten his death, which at this time seemed inevitable. In a week's time, with great difficulty, he underwent the fatigue of a journey home again, in the same cart that brought him here. Before he quitted the Infirmary and was made an out-patient, it occurred to me, that it was probable the nitric acid might be tried to advantage in this case. I accordingly began by giving him 3 i. mixed in a pint of water, which he took in the course of twenty-four hours. He said it felt warm at his stomach, and at first taking flushed his face; he continued it however with little interruption, from April 4th, to June 10th; a week after which time, to my very great surprise, he walked from his house (eight miles distant from Worcester,) and called upon me. He looked so different from what he did when last I saw him, that I was under the necessity of enquiring his name and case, before I could recollect him. Mr. Price, the Apothecary's assistant at the Infirmary, was equally surprized when he called there.

The wound in his groin was only dressed superficially, with a simple cerate of wax and oil. The discharge, he informed me, had gradually lessened, till it ceased entirely. The swelling and inflammation of the thigh had gradually subsided, and assisted by the moderate pressure of a callicoe roller, was finally restored to its usual size and action.

As a proof that this unexpected cure was principally effected by means of the nitric acid, the poor fellow had a relapse once or twice during his confinement at home, for want of his medicine, the quantity dispensed to him from the Infirmary having been all taken before he had an opportunity of sending for more.

CASE IV.

I. B. aged 23, had undergone a regular course of mercury by friction and the mouth, till a strong salivation was excited, with the hope of curing some obstinate venereal ulcers on his thighs, and one or two ill-conditioned and spreading chancres on the penis. He afterwards took

bark, opium, steel, and sarsaparilla, for some months, without any manifest advantage. Feb. 20th, he began to take the nitric acid, and on the 8th of April following, was dismissed perfectly cured. His mouth was never (by this medicine) affected with salivation, or his gums rendered spongy or swelled.

CASE V.

I. B. aged 35, was admitted an out-patient of the Worcester Infirmary, July 9th, 1797, for an ulcer near the right condyle of the lower jaw; a small portion of the interior part of the jaw was laid bare—was becoming carious, and the discharge highly offensive. The carbon cataplasm was immediately applied to the ulcer, for the purpose of correcting the fœtor, and the inside of his mouth was examined, to determine whether it might not in some measure have been occasioned by decayed teeth; but this not being found to be the case, the poultice was persisted in till the wound put on a cleaner appearance. During this time, the man confessed to a pro-

professional gentleman of my acquaintance, that he, at that time, was affected with venereal complaints. The next time I examined him, he informed me that he had lately had a slight hernia humoralis, and other symptoms of venereal infection. The charcoal application was now laid aside, and the wound dressed with mercurial ointment; and at the same time he was ordered to take the *nitric acid* internally 3 ij. in 24 hours. This medicine he began to take July 18th; and this day, Aug. 19th, was dismissed, cured; the ulcer in the jaw being completely healed, and no symptom remaining of venereal infection.

I have found the nitric acid successful in various cases, where no other medicine had been previously given; and in some, after the failure of the bark, and many other efficacious *tonics* as they are generally called. It may be presumed, therefore, that when the efficacy of this medicine has been more generally introduced into practice, and successfully employed, it will be

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esteemed a valuable acquisition to the healing
art.

I remain, dear Sir,

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W. SANDFORD.

Letter from Mr. BAYNTON.

Dear Sir,

IN compliance with the request of your yesterday's favour, I herewith send you an account of two *venereal* patients, who were cured of the last stage of *that* disease, after a failure of carefully conducted mercurial courses. On the 6th of January, 1795, a man named ———, about 20 years of age, applied to me for the cure of venereal ulcerations, and eruptions upon his arms, breast, and forehead. He said, that about 10 months before, he had contracted a venereal complaint, of which the first symptoms were chancres, and buboes that suppurated; that he had applied to an itinerant practitioner for relief, and by his assistance, was freed from those complaints; but that inconveniences of a more distressing kind were soon observed to succeed their removal; that his throat became obstinately sore, and that ulcerations and blotches soon followed. I or-

dered him to take half a grain of the muriated quicksilver, with an equal quantity of opium, morning and evening; and to drink with it, half a pint of a decoction prepared with the usual quantities of guaiacum, saffrafras, mezerion, and liquorice. These medicines were persevered in till the middle of May, and continued some weeks after the removal of the symptoms for which they were exhibited.

I did not see him from that time till the 25th of August: he then applied for the relief of a train of symptoms that nearly resembled rheumatism. He had much pain in the larger joints, with an accelerated pulse, and a regular increase of pain and fever every evening. He had been employed in the open air some time before this application, and had, as he said, been sometimes improperly exposed. I therefore did not hesitate to consider the complaint as rheumatick, and to treat it accordingly. The saline and other medicines, with antimonials, liniments, &c. were tried till the end of Sept^r without any advantage. It was not till the beginning of January, 1797, that

any thing could be observed, which rendered it probable that his complaints were occasioned by venereal poison. About that time nodes began to appear upon his shins, and gradually increased till the 20th; when he was directed to take two drachms of the strong nitrous acid, or aqua fortis, diluted with two pints of water, every day, in any way he could with the least inconvenience. In less than three weeks his pains began to abate, and his health, which was much impaired, to return. The medicine was continued till the 25th of April, when the pain and stiffness of the large joints, which before that time was so considerable as to render it probable that the disease would end in incurable lameness, together with the excrescences upon the tibiæ, and all his other inconvenient symptoms, except weakness, were perfectly removed.

A constant discharge of saliva, equal in quantity to what would have been secreted under a mild mercurial course, attended the administration of the acid in this case; but without any soreness of the mouth, or disagreeable smell.

C A S E II.

WM. GREENSLADE, aged 21 ; a private in the Artillery, contracted a venereal complaint about the beginning of March, 1796. He had a chancre, and a bubo which suppurated ; and took mercurials by the direction of his acquaintance and fellow-soldiers, till the 1st of April ; when he became a patient in the Royal Hospital at Woolwich, and continued there a month, during which time his mouth was kept in a constant state of soreness, by the use of mercury. On the 1st of May he was discharged, apparently cured ; but in three months after, his throat became sore, and continued so till May, 1797 ; he then began to feel nocturnal pains in the breast, and frontal bones, and to perceive nodes upon the shins, together with a swelling upon the ulna, near the wrist of the right hand. On the 8th of June, I was requested by serjeant Evans of the same corps, to render him assistance. His pain had then so much reduced him, and the joints of his knees were so much enlar-

ged, that he could not turn in his bed without difficulty. A drachm of mercurial ointment was directed to be rubbed into his thighs every night, and a decoction of guaiacum, saffrafras, &c. to be taken as usually directed. On the 11th, his pains were so great as to require the assistance of opiates, which, with the frictions and decoction, were continued till the 21st of July, a period of six weeks, without in any degree abating his pain or swellings. His health was then much impaired, his appetite gone, his pulse quick and small, and his general appearance hectic. On that day, two drachms of the nitrous acid diluted with two pints of water, was sent him, and he was directed to take as much of it as he could in the day. The first day, he drank the whole quantity; but was so much gripped by it that he could not afterwards be prevailed upon to take more than a pint, or a pint and a half, in the 24 hours. In less than ten days, his pains began to abate, and his health to mend. His recovery has been so rapidly advancing since, that I yesterday found, when I called to see him,

that he had walked out to take the air, and that except the swelling upon his right arm, and some stiffness of the knee joints, he was free from every symptom of disease. In this case, no ptyalism, or soreness of the gums, were occasioned by the medicine.

In another case similar to these, that had resisted mercury in every way, and where this acid appeared to have a fair trial, I could not discover that the venereal symptoms were alleviated, though the patient's general health was improved by its use. In a case of ulceration, attended with actions, specifically diseased, that affected the arm of a patient who had long laboured under syphilis, and who had taken very large quantities of mercury without advantage, the acid was also tried by my advice without success.

I am, dear Sir,

your sincere servant,

Bristol, Aug. 22.

THO. BAYNTON.

*Letter from Mr. Bowles, Surgeon to St. Peter's
Hospital, Bristol.*

Dear Sir,

THE following is an account of the patients to whom the nitric acid was exhibited last winter in St. Peter's Hospital. You may depend on it as accurate in all essential circumstances.

Aug. 24, 1797.

I remain, &c.

To Dr. Beddoes.

FRA. C. BOWLES.

ANNA HEAVEN, a patient of my own, had a large and foul ulcer on the calf of the leg, bearing all the marks of the secondary venereal ulcer; under a course of the cort. peruv. and the application of local stimulants, the ulcer in her leg healed: but at this period some glandular tumors appeared in the neck, which proceeded to suppuration; the nitric acid was now given her, beginning with sixty drops each day, and increasing the dose gradually to a hundred and twenty. This plan was continued six weeks,

during which no alteration could be perceived, except an increase of appetite, and occasionally, some degree of gnawing pain in the stomach.

ANN RICHARDSON, a patient of Mr. Salmon's, had nocturnal pains in the bones of her extremities, and nodes on the left ulna and tibia. For some weeks she used mercury without any apparent benefit. The nitric acid was given her in the same quantity as to the last patient, and persevered in for an equal length of time; but without mitigating the disease. She experienced the same increase of appetite, and uneasiness in her stomach, as the former patient.

MARY POWELL, a patient of Mr. Davies's, had nocturnal pains in her bones, and an eruption which was supposed to be venereal. Mercury had alleviated, but not removed these symptoms; for about six weeks, she continued the nitric acid, in the same doses as the former patients, but it produced no change in the

disease ; the effects upon her stomach and appetite were the same as in the foregoing cases. The acid given to these women was at first the common nitrous acid ; but in a few days it was changed for the colourless acid distilled over silver by Mr. W. Clayfield.

Letter from Dr. Girdlestone.

I have tried the nitric acid in a variety of syphilitic cases, without having been able to effect any cures with it. Those of my patients who have taken it, to the quantity of a drachm and an half, or two drachms daily, have generally found it to produce, within eight or ten days, a copious flow of saliva, with tenderness and swelling of the gums, but not unfrequently an increase of the venereal symptoms.

I have then generally substituted the mercurial frictions, with very rapid good effects. But the salivation excited by the nitric acid, does not seem to prevent the patients from bearing the mercurial frictions as long, without producing ulcerations about the gums, as if no previous tenderness had been excited by the acid. I have also observed, that the nitric acid may be immediately given and persisted in after a mercurial salivation, without producing any farther alteration upon the gums, unless it be that of

enabling the patient sooner to resume mercurial frictions.

As it is difficult to restrain drunkards to acid beverage, I have not been able to try the nitric acid in many liver complaints.

I have relieved one dram-drinker with the nitric acid, under a liver complaint, where a mercurial salivation had failed.

After six weeks progressive convalescency and discipline, he regained his liberty ; and then his abuse of it soon re-produced his disease, which will now prove fatal. I have relieved, with this acid, one patient with spasmodic asthma ; one with dyspnœa, and two with piles. One of the cases of piles, with the effects of the acid of lemons upon another of my patients, I shall annex with this letter.

I remain, dear Sir,

Yarmouth,

Your's very truly,

Aug. 2. 1797.

THO. GIRDLESTONE.

A very stout made maiden lady, of about 34 years of age, had laboured for upwards of six years, under the most obstinate piles. They were both external, internal, and blind; and had been treated by a variety of surgeons and physicians, in London and the country, to so little purpose, that for many months she had attempted to derive all her medicinal aid from large doses of castor oil, Ward's paste, and a very low diet. Under this treatment, the tumors changed from the blind to the bleeding piles, but without the discharge affording any sensible diminution of pain. Her countenance was become exceedingly bloated, her person unusually fat, her mind torpid, and she was unable to walk, or to bear the motion of a carriage. In consequence of these symptoms, I ordered her to take one grain of calomel every third night, with daily doses of ferrum vitriolatum and cascarilla, and two or three glasses of port wine in the 24 hours.

After about three week's perseverance in this plan, she became active, thinner, florider and

stronger; but the costiveness and local pains were only a little relieved.

She had persisted in these medicines about ten weeks without any farther benefit, when I was requested to think of some other means. The arrival of your publication determined me to try the nitric acid, without the assistance of any other medicine. She had not taken this acid above a week, before she became regular in her bowels, free from pain, and able to bear the motion of a carriage, as well as the exercise of walking.

Her gums were tender after about a fortnight's use of the acid; but by diluting it more with water, she has ever since been able to take this medicine, and to remain free from dis-ease.

In the year 1796, a gentleman of a very strong make, with dark colored hair, in about the fiftieth year of his age, had for six months, attempted to starve himself to death, by feigning bodily disease. During the last weeks of those six months, he had refused all sorts of nourish-

ment but tea, without any sugar in it. He was exceedingly emaciated; and under this diet, the little urine which he evacuated, had the appearance of the red particles of the blood mixed with the serum. His breath was fetid, and his tongue changed from a white to a brownish color. His pulse, which had been always very slow, was now still slower, but not interrupted. The mind at length becoming weak as well as the body, he was brought to a confession, that I had all along been right in asserting, he had resisted the calls of hunger. He was then gradually recovered from his emaciation, by the regular, but cautious supply of food. After several slight relapses, which were checked by the observations of his friends, he took the opportunity of his relations being in London, in January, 1797, of resuming his former melancholy determination. On the 12th of February I visited him, and was informed, that for the last three weeks, he had lived entirely upon the juice of lemons and a little water. He was exceedingly languid and emaci-

ated, with a slow pulse as before; and the little urine which he evacuated, had the former bloody appearance. His gums were swelled, and had a most beautiful crimson tinge. He had a slight salivation, with a fetid breath, a dry cough, and a blush all over his skin, even over his hands and arms. He said he was without pain, and that he felt perfectly tranquil. As I was not able to prevail on him to take any thing else, I desired that he should be indulged in the juice of lemons, until I should see him again in three days. I saw him again on the 15th, and found him nearly as I had left him, except that the cough was now attended with an expectoration of mucus, which resembled cream when mixed with a very small portion of the fresh juice of raspberries. In order to decoy him from this diet, I told him that a small portion of acid contained much nourishment, and therefore he might continue to take the lemon juice, until he could relish some other food. On the 18th I saw him again, and found that under the pretence of no longer relishing acids, he, on

the evening of the 15th of February, had exchanged the lemon juice for strong tea, which he had drunk without either sugar or cream. His gums and his skin remained unusually red, and his tongue moistened with much saliva ; but the cough and the expectoration had entirely left him. The urine was less bloody, probably from a larger quantity of liquid having been swallowed.

From this state he continued growing more drowsy and feeble, until the 21st of March, when he became alarmed with such a sudden sensation of spasm and weakness, as made him call for hot negus, and every thing which could be thought of to relieve him. He kept constantly swallowing food, which was as constantly rejected ; but it was accompanied with a large portion of viscid mucus. In this state he remained until the 25th of March, when I saw him, and found that notwithstanding he had seemingly retained no food, yet he had acquired a considerable share of strength since my former visit on the 18th of February. He had, however,

from the effects of the liquid food on his stomach, contracted a sort of hydrophobic horror at the sight of liquids. He was therefore ordered slices of solid food, and half a grain of opium without any liquid, until brandy could be substituted for opium, and brandy and water for brandy. Under this treatment he gradually retained every sort of food, and acquired more health and spirits, than he had enjoyed for many years.

To Dr. Beddoes.

T. G.

CONVERSING with different individuals on the anti-siphylitic powers of the nitrous acid, I was informed by Dr. P. a student lately from Edinburgh, that one of the medical professors there had frequently used it, but with small success. I immediately wrote to the professor, and have been favoured with the following distinct summary of his experience.

Letter from Dr. Rutherford.

Edinburgh, August 24, 1797.

Sir,

I HAVE made many trials of the nitrous acid in Lues, chiefly on patients in the Royal Infirmary, and with various success. In some instances, as Dr. P—— informed you, this medicine has failed me altogether : but even then, though it seemed to have no power in removing the disease, yet it certainly did not produce any bad effects on the constitution. In other instances, however, the beneficial effects of it

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have been most conspicuous, absolutely surprising, and far greater than I remember to have ever seen produced, in the same space of time, by any preparation of mercury. Such salutary effects have been remarked principally in the more advanced stages of the disease, when some of its most distressing symptoms were present; particularly severe pain in the bones, swellings in the periostium, &c. I have seen all these pass away most rapidly under the use of the acid. But I must acknowledge, that I have known the same symptoms to have recurred, soon after the medicine had been discontinued; and in one example where this had happened, the same complaints, which had yielded almost at once to the acid, now proved absolutely refractory to it, and were at last removed by a course of mercury.

I have lately seen an instance or two, where the disease was so inveterate, and the constitution so broken, that neither the acid nor mercury were adequate to check the progress of the disease; as trial had been made

of both in fucceffion, but without any conspicuous advantage : in thefe, therefore, the acid has been ufed at the fame time with the mercury, and the two together have produced a moft favourable change in almoft every fymptom.

What the particular circumftances are, which occafion fuch difference of refult in different examples, I confeß I have not been able to afcertain. I am happy, however, to think that thefe will probably foon be afcertained, by fome of the many ingenious obfervers, who, I learn, are now occupied with the fubject. Moft fortunate will it be for mankind, if a certain fubftitute be found for mercury, in the cure of lues, as well as other difeafes. And fuch, I would hope, may foon be found in fome of the acids, or their compounds. For though I cannot fay that my own trials of the nitrous acid in lues have been uniformly fo fucceßful as I might have expected from fome printed accounts of its efficacy, which I have had acceß to perufe, yet they fufficiently prove, that in certain ftates of the

disease, and in certain constitutions, it is a remedy of very great value.

I have the honour to be, &c.

D. RUTHERFORD.

Royal Hospital, Plymouth, *Aug.* 28, 1797.

Sir,

THE case of Robert Harris, which I now beg leave to transmit, would have been sent with the other cases, but the event was then doubtful; as the man is now recovered, and his case a very singular one, and the use of the nitrous acid more exemplified, I thought it might merit your attention.

I have the honour to be, &c.

STEPHEN HAMMICK, Junr.

ROBERT HARRIS, a Seaman, aged 24, fair complexioned, was received into this Hospital, June 1st, 1797, for a venereal complaint. He says, three weeks after the connexion, he found a swelling in his left groin; at the expiration of ten days, he applied to the surgeon's mate, (the surgeon having been sent on shore during the late mutiny;) some mercurial pills were ordered, which produced a ptyalism; and a poultice was applied to the part. About a

fortnight after, the bubo was opened by incision, but another soon formed lower down, which was opened in like manner; but both soon spread into one. A new surgeon was appointed to the ship, and the man was sent to the Hospital. His bubo was now phagædenic, and, by an accurate measurement, was eight inches in circumference. The edges were much inflamed, and the bubo itself was black, foul, spreading, and discharging ichor highly offensive to ourselves, and intolerable to others. He was now weak and emaciated, without appetite, with night sweats, diarrhœa, and a harrassing cough. June 1st 1797, the day he became our patient, he took, *acid: nitros: ʒij, syrupi simpl: ʒviii, decoct: lignor: ℥ij, m: et bibat quotidie.* The bubo was fomented with a strong decoction of *rad: althææ: capit: papaver, et flor: chamæm.* A poultice of yeast and oatmeal was applied cold; he took an opiate at night, and a spermaceti mixture for his cough.

June 4th. The bubo in a spreading state; the diarrhœa more profuse; the nitric drink

continued; a rhubarb bolus, with confection opiat: administered every sixth hour.

9th. Large sloughs thrown off in the poultice; the ulcer, nevertheless, continued to spread; flatus in the stomach and intestines; diarrhœa less; the bolus with rhubarb and confection taken only twice a day; two grains of opium given every six hours; nitric drink continued; a galbanum mixture for the flatus.

14th. The sloughs cast off; the ulcer was so wide and deep, that he was enjoined strict confinement to his bed, lest an artery, by exertion, should burst; the yeast poultice was changed for another made with fresh leaves of cicuta; his sweats diminished, and diarrhœa increased.

20th. The disease gained ground; the ulcer extended in circumference and depth. The man was so exhausted that he could not raise himself in bed; was propped up with pillows, and deemed irrecoverable. The nitric medicine; fomentation just warm; cicuta poultice and opiate continued. Anxious to relieve, the occasion pressing, the nitric acid a new medicine, not

given by us in a case so deplorable, we administered the bark ; but as every dose was immediately vomited up, the bark was wholly laid aside. 23d. Nitric drink continued : the myrrh mixture administered for the cough ; this he took but one day, the stomach rejecting it. 25th. His situation considered desperate by ourselves, and others of the faculty, not belonging to the Hospital, whom curiosity drew hither from reports of the case ; nitric drink, cicuta poultice, and opiate continued ; almond oil mixed with honey, given for the cough. 26th. A gleam of hope ; one of the inguinal glands began to clean, and the bubo ceased to spread : his recovery commenced. The edges of the bubo were accurately measured ; its circumference was *fourteen inches and three quarters* ; under the loose and flabby edges, a probe, all around, was passed more than an inch ; the lower part of the *musculus iliacus internus*, the upper part of the *pectinalis* and *adductor longus femoris*, were laid bare ; four of the inguinal glands, all bare as well the muscles, were so

loose that we expected their entire separation. Though these appearances were favourable, yet he was very feeble, had still diarrhœa and sweats; a low pulse, no appetite, and his urine passed from him involuntarily: nitric acid, poultice, and opiate continued. 30th. The ulcer clean, his spirits better, cough less; nitric drink continued. July 7th. The bubo still cleaning; granulations rising; appetite returning; sweats and diarrhœa lessening: nitric drink continued. July 14th. Bubo quite clean: granulations firmer: the fomentation and poultice discontinued; a dressing of simple white ointment on lint applied: appearance and health improved; cough still less, diarrhœa ceased, sweats abated. 24th. The inguinal glands not eminent; the granulations rising to a level; his appetite good: sat up two hours. 30th. Recovers rapidly. The ulcer fills up; moved about the ward on crutches; the nitrous acid reduced to one drachm and a half daily. He continued the drink in this quantity of the acid, to this day, August 28th; the bubo, though not

quite healed, is within the compass of a sixpence; the cicatrix, as far as it had extended, is firm, and with a healthy appearance, with no tendency at all to spread again. His appetite, strength, and flesh are restored; his leg and thigh, however, are contracted, and he has sometimes, by night, an involuntary discharge of urine. It is a pleasure to remark, that he has not any appearance of the disease any where, in any form whatever. However, it is our intention to keep him under the nitric course, till the cicatrix is completely formed. It may be worth while here to notice, that he has taken *one hundred and sixty-four drachms of the nitrous acid*; and this quantity has not produced the least appearance tending to salivation.

To Dr. Beddoes.

Royal Hospital, *Aug.* 28, 1797.

Sir,

THE account of the case of Robert Harris, by Mr. Hammick, Junr. accompanies this letter. Mr. Hammick has already stated, that the patient has *taken one hundred and sixty-four drachms* of the nitrous acid; that this quantity has not, in any degree, excited salivation, nor impaired the habit. Although he had a diarrhœa, he continued it, and the sweats were restrained under its use. The opiates, though so largely administered, were given more with a view of alleviating pain, than to arrest the sphacelus in its progress. Opiates uncombined, have often been given in such cases, but have failed with us. The bark and myrrh were administered but one day; and every dose was vomited up. It cannot therefore be said, that tonic medicines assisted. During the whole course, the man drank more than a pint of port wine daily. But port wine, it may be presumed, would not cure the bubo. It is evident then, that no kind of

diet interferes with the nitrous acid, or counteracts its effect. The patients on whom this medicine has been tried, have used the different kinds of diet, according to the established rules of the Hospital. This cure, thus far advanced, has not been made in *a corner*, but in a great Hospital. A short history of every case in which the nitric acid has been used, was taken; the books and the medicines prescribed, are now to be seen, and are open to any enquirer. The man himself is still with us, and the vestige of his malady is sufficiently conspicuous. Let it not be said that the nitric acid may succeed with sailors, and sailors only. It has succeeded with marines, new recruits who had never embarked, and had no scurvy. Whatever may be the success of this medicine, when its use becomes general, I can aver, from my own attention, that Mr. Hammick's account is true; that the case has been very accurately minuted, and faithfully stated. The case, though singular in its nature, progress, and cure, is not a single instance of the efficacy of the nitrous acid. We

still go on successfully, and if in future we should be disappointed, if it should not answer our expectations in every species of the venereal disease, we shall, as far as comes under our notice, remark, and communicate the failure. It would be wrong to impute infallibility to it. The medicine has failed in several instances, and so has mercury. It will require time, acumen, extensive practice, unprejudiced judgment, to bring this medicine fairly to the test; to remark in what stages of the disorder it will do good; where its success may be doubtful; where it is certain. It seems to answer better in buboes, chancres, excoriations, than in venereal eruptions, diffused over the whole body.

I am, &c.

FRA. GEACH.

On the eve of putting out the present collection of facts, it was incumbent upon me to ascertain the situation of Mr. H——. This gentleman was the second (probably the first truly venereal) patient ever treated by the nitrous acid in Europe. Nor could a more unpromising case present itself in any quarter of the globe. Having been repeatedly relieved of the secondary symptoms by mercury, he had constantly relapsed within three months. In autumn 1796, his condition had become dreadful. He suffered inexpressibly from the principal bones. Large nodes had formed. “The sinews of his arms, thighs and legs, were stiff and contracted.” See *Confid. on Airs. P. V. Appendix*, p. 86. His nose was enlarged. He swallowed with difficulty. His hands were a shapeless mass. Of his fingers he had no use; they were rigid and every joint swelled. He lay in bed a mere

skeleton, without power to stir. In eight days after beginning on the nitrous acid, his pains were gone. On the tenth he walked. Nov. 29, 1796, I saw him free from all his symptoms, except stiffness of the fore-finger of his right hand. Except some flow of saliva, he had experienced none of the effects that mercury commonly produces. A few days ago, I found him following his occupation. He has just favoured me with the following note :

Sir,

I have the pleasure to inform you, that I have been totally free from pain since I was so happily freed by the use of the nitrous acid ; but the stiffness still remains in the middle joint of the fore-finger of my right hand ; and have also a breaking-out all over my body, which is attended with a violent itching, that breaks my rest. I am now about to enter upon another

course of the acid, and have great hopes it will
remove this disagreeable complaint also.

I am, &c.

BRISTOL,

R. H.

August 30, 1797.

The first case in which the nitric acid was tried in Europe (and tried in vain, see "*Confid.*" part v. appendix p. 85), has proceeded in the following manner. The patient took six quarts of *Velno's veg. syrup*, without the smallest sensible effect. He then relinquished medicine altogether. About this time he daily discharged a purulent slough from his nose, which, as his feelings shewed, came from the posterior nares; no ulceration was visible in the throat. In the spring, exostoses arose on the cranium. I concluded from former observations, that the medicines he had before used in such immense quantity would cure him. I am this day (Sep. 4th.) informed, that he recommenced the free use of mercurial inunction and nitrous acid. During this course, his strength improved, and in three weeks the nodes began to diminish, and in a month more totally disappeared. During this process, he rubbed in a pound of mercur-

rial ointment, and took six ounces of concentrated acid. Not the least tendency to salivation appeared, nor any uncomfortable symptom. His health daily improved. But he still every day blew the scab or slough out of his nostrils. The mercurial pill was now given. The amendment went on rapidly, till within this fortnight, upon taking a slight cold, he was attacked with venereal ulceration of the throat. He has again returned to the nitrous acid and mercurial ointment, which he is to continue as long as he has any vestige of disease behind the nose.

Mr. Cruikshank of the Royal Artillery, Woolwich, has lately published seventeen cases of primary lues, treated successfully; some by the nitrous acid; some by the citric; some by the oxygenated marine; and others by the oxygenated muriate of potash. He adds, (and in the present scarcity of comparative trials, the remark

deserves attention,) that in one very recent case, the muriate succeeded, where the nitrous acid, in the dose of three drachms daily, had little or no effect. Doctors Irwin, Jameson, and Wittman, surgeons of artillery, have related fourteen cures in primary cases. The latter reports a case in fair progress, and a secondary case that was proceeding promisingly, till from great sloughing in the throat, it became necessary to abandon the remedy, because no liquid could be got down. Since March 13, 1797, he has used no medicine but nitrous acid, this having always answered. Dr. Currie, in general terms, bears witness to its efficacy; and Dr. Trotter mentions three cures of inveterate syphilis. (See *Two cases of Diabetes* 2 vols. 8vo. Dilly.)

There is, therefore, already in favour of the nitrous acid, a far greater fulness and variety of testimony, than has ever been produced in favour of any of those other substances that have at various times been proposed as substitutes for mercury. From the whole it clearly results,

that *where the constitution is broken, the habit feeble or scrupulous, the cure should always be attempted by the nitrous acid, in preference to any other medicine.* Whether this rule is to be generalised, might very soon be determined. The propriety of removing every scruple, has induced me, at the risque of a good deal of trouble, to hazard a proposal, which the reader will find annexed to the present pamphlet.

By some such plan, we may acquire, in two years, the knowledge of a century. Certainly we shall acquire enough to direct practice. A complete set of facts, or a theory will scarce be attained. For it will scarce be deemed justifiable to vary methods, till all the doubts, which an ingenious speculator can start, may be resolved. It may assist enquirers, if I briefly state some considerations, to which all who would draw just inferences must attend.

Whether we adopt the obsolete, or the prevailing language concerning the operation of mercury, is thus far indifferent. It is easy to conceive the great improbability, that a single

power should be exclusively adequate to the removal of siphylitic affections. The supposition is contrary to the general tenour of our experience of nature. Most of her productions appear to be members of a series. There is hardly any substance or agency, of which it can be averred, *nec viget quicquam simile aut secundum*. If mercury eliminate the venereal virus by the salivary glands, other untried bodies may eliminate it by the same, or by other emunctories. But salivation not being essential, the curative operation is supposed to consist in contractions of vessels, nervous vibrations, or other actions of whose quality or quantity we have no test or measure. It is, however, difficult to suppose mercury, and mercury only, capable of exciting them: and in whatever you make the operation of mercury to consist, an hundred modes or degrees of action, each different from the other, and all from any mercurials can produce, may be curative of siphylis. Mercurials probably produce other changes in the system, besides those that supersede the effects of venereal infec-

tion ; and some of these changes appear highly detrimental to certain constitutions. When hurried so as to produce violent salivation, mercurials are said not to have cured siphylis.

Let us, for an instant, suppose that mercurials and the newly tried salts have a common operation, depending on oxygen. Now it is most likely that there is a given quantity of oxygen gas, which if inhaled, would cause the same feverishness that has been observed to follow the use of the oxygenated muriate, viz. thirst, whiteness of the tongue, quickened circulation, and fizy blood ; or at least, the latter of these appearances. Will oxygen gas, so affecting the system, cure siphylis ? P. 105, part iii. of "*considerations on airs*," a case of siphylis is related, where oxygen gas was thought beneficial. But the circumstances are indistinct, and I think the quantity of air too trifling for any effect. Again, will mercurials and our salts co-operate to a cure ? Will half the necessary quantity of a mercurial, joined to half the necessary quantity of nitrous acid, or oxygenated

muriate, give the same result as the full quantity of either? From a passage in Dr. Rutherford's letter, there is room to surmise that they would. And so they ought, if their action be identical, or if they owe their virtue solely to oxygen. We have not, it is true, such accuracy in medicine as to halve necessary quantities or doses; but, in a number of cases a difference in the dose should be sensible, if the supposition is just.

Unless it be true, that very diversified actions are capable of effecting a cure in syphilis, it would seem, from other facts, that no antisyphilitic remedy can owe its virtue to oxygen. The occasional efficacy of certain plants, as *sarsaparilla* with *mezeoreon*, the *astragalus exscapus*, &c. is strongly attested. But how can the decoction of a bitterish, sub-astringent root, such as that of the *astragalus*, be imagined capable of oxygenating the system? Nor indeed, have other plants, which have been said to be useful in syphilis, the sensible or chemical qualities of those substances that contain oxygen largely and

loosely combined. I refer to these plants for the sake of illustration ; and would by no means be understood to speak of them, as generally useful in venereal complaints. There are, I believe, but few constitutions in which any of the number will be found efficacious, even in the secondary stage of lues. But it seems sufficiently ascertained that there are some (e. g. see *Girtanner's Vener. Krankh. i. Murray App. Med. vi. 83.*) It is to be lamented, that a catalogue of these plants, accompanied with what evidence exists of their powers, is not made out. For however disagreeable medicinal drenches may be, nine patients in ten would swallow all the decoctions the surgeon can contrive, rather than endure the tortures of secondary syphilis. Our vendors of quack medicines for venereal complaints, live, I suppose, chiefly upon these uncertain and neglected articles of the *materia medica*. Perhaps however their preparations are little else than sugared decoction of the woods. Be this as it may, single cures are proclaimed in advertisements, and probably hundreds of failures suppressed.

A list of the substances, to the trial of which the principle of oxygenation leads, would be useless. In the ultimate medicinal results, differences will no doubt appear, which cannot be explained, from the degree of combination of oxygen. Oxygenated muriate cures the venereal disorder. What will nitre do? It is curious that the citric and nitrous acids should both cure lues venerea; but neither sulphuric acid nor acid of tartar cure the scurvy. In such a manner does nature play fast and loose with analogies!

If the nitro-muriatic acid (*aqua regia*) be used at all, great caution should be observed in regard to the dose. The variety, prepared with muriate of ammonia, (sal ammoniac) may not answer, though the others should. Some particulars, at least, in the literary history of syphilis, favour this conjecture. Peyrilhe (*Remède nouveau, contre les maladies veneriennes. Paris, 1794*) having revived the use of volatile alkali, professor Adolphus Murray decisively shewed that the inflammation of chancres is increased

by it, and that in other forms of the disorder, it is prejudicial. *Medit. circa methodum huius venereæ curandæ. Upsal, 1779.*

It is manifest, from all the facts taken together, that nitrous acid does not act like mercury upon the salivary glands. Delivering it by a tube low down in the mouth, is an experimentum crucis. In some cases, by stimulating the salivary orifices, it undoubtedly did occasion salivation. In a case of spasmodic asthma, mercury brought on deep ulcers of the tongue. I saw the same from the nitrous acid.

Most observers have noticed the great effect of nitrous acid in increasing the appetite. In the asthmatic case just mentioned, and in a variety of instances, from the autumn of 1796, to the present time, I have myself witnessed the fact. It has occurred in several delicate women with whom inappetency is a constitutional defect. In indigestion, attended by diminished secretion of bile, I have experienced the utility of the nitrous acid. It has been effectual after *tussis hepatica*,—that terrible disease of hard drinkers

was fully formed. As a means of checking night sweats in consumption, it has shewn, in my practice, no superiority over sulphuric acid. Its tendency to produce diarrhœa appeared equal.

In the capacity of efficacious stimulants, totally different from opium, I expect that the nitrous acid and oxygenated muriate,* will supply an immense desideratum in the materia medica. The effects they produce, point them out as deserving trial, where the arterial, nervous, and absorbent functions languish. I can corroborate this surmise by a few slight observations. But let me endeavour to shelter them from contempt, by remarking, that as they were not forwarded to me by their authors, so neither are they delivered by me to the public, as full

* The oxygenated muriate of potash can be made cheap by some of the Manchester manufacturers. I should think they could afford it at 1s. the ounce, or under. In London, I am informed, it is sold at a most extravagant price.

evidence of the powers alledged, but merely to excite enquiry.

Nitrous acid in low fever. " At this moment, a fever is in the house, and rages with considerable severity; and I am not without fear of its consequences. It is what Cullen calls *typhus nervosa*. The patient is very low, without delirium: nothing seems at present to tend to the more infectious species of this disease. I have frequently observed, and so must you, that the first has gradually changed into the last. I have tried the common remedies, and the debility increases, and the appetite even further diminishes. Three cases of this disease have been lately treated by the nitrous acid, by one of our surgeons, Mr. Bartlett. With him it proved successful, after bark and other bitters had been fruitlessly exhibited. June 8th. Let four drops of the common acid of the shops, with as much water as makes it grateful to be taken for a dose. I intend to give about 40 drops in 24 hours. June 9th. My patient has taken about a drachm of the acid. It was followed after a few doses

only, an hour's interval being allowed between each dose, by considerable reduction of the pulse. From frequent, weak and thready, it became slow, equable and fuller. Between 6 and 7 hours refreshing sleep in the night; an effect which opium failed to produce. But the most material circumstance is, that after a constant loathing of all food, from the commencement of the disease, to-day veal was craved and eaten, with some relish, to the quantity of upwards of an ounce along with greens."

"The exacerbation in this case, which was very considerable, and took place daily, felt the influence of the new medicine, the succeeding recurrence being slighter, when a few doses only had been taken. The second day broke its powers still further, and changed the time. On the third day of using the acid, there came on nothing but a short thrill and uneasiness. In two days more, my patient was convalescent, so as to sit up in bed an hour and more at a time. Sleep returned and was refreshing, which opiates had constantly disturbed. The yellow

bark had, on trial, heated, and greatly increased the fever. A moderate portion of wine was allowed, mixed with panada for food."

"I must not too hastily pronounce an eulogium on this medicine; but so far it angurs well. If my theory be right, we are to expect good effects from it in cases, chiefly of great debility, whether from irritation of the nerves, or where there is solution of the fluids. Should my advice be required in confluent small pox, I should fly to it with hopes of success."

"A friend has tried nitrous acid in a case of fever, where it failed: but he acknowledges it was such as he ought not, on maturer deliberation, to have ventured its reputation in. The case was marked with considerable inflammatory action of the arterial system. It rendered every symptom worse." *Extracts of letters written in June and August, 1797, by Dr. Hamilton of Ipswich.*

Case apparently of lymphatic affection with feverishness, treated by Mr. Bartlett, surgeon, of Ipswich. Mrs. M. of a lax fibre, cachectic habit,

subject to dyspepsia; has often pains in various parts of her body, especially about the joints, resembling chronic rheumatism; is frequently indisposed by sudden alterations in the temperature of the air, change of dress, or small irregularities of diet. Within the last seven years, she has had two returns of a sort of rheumatic fever, attended with considerable debility, in each of which the disease, under the usual treatment, continued at least six weeks before she could be properly termed a convalescent. Last spring she had a return of this indisposition. P. 110. Tongue foul and dry, thirst, urine high-colored and without sediment. Pains over her like rheumatism; wrist and fingers greatly swelled, hard, but not discoloured by any redness. The fingers could not be bent (from the increased quantity of lymph deposited by the exhalants and unabsorbed by the corresponding lymphatics?) whence Mr. B. concluded that there must be considerable debility in the lymphatics. The ancles and feet partook of the same tumefaction, though in a less degree. They were

hard to the touch and pale. Skin dry; sleep disturbed. The saline mixture, with *tinclura opii* and *vinum antimonii* was continued for several days, a gentle emetic, with a proportionate laxative being premised. The pores were opened by the medicine, but the fever not abated. This plan was now relinquished, and as the disease appeared to partake so much of debility, the bark was administered, but with no better success. Mr. B. began to be alarmed for the lady's safety. It was now he turned his attention to the nitrous acid. Three drops of the common acid of the shops. diluted with water, were given every three hours. The second day, the fingers (before stiff and tumefied) were lessened in size, and slightly moveable. Nights more refreshing. Tongue becoming cleaner and moister. Urine paler, with sediment. P. less frequent, and every troublesome symptom yielding. One drop was added to the dose, which was now taken 4 times a day. Under this treatment, the lady in about six days more, needed no further medicine. Her hands and

fingers were soft, small, and pliable as usual. Health returned with natural appetite and sleep.

Case of chlorosis in a note from Dr. Halls of Worcester, to a friend.

“ The case I promised you, I can only *now* tell you, was a chlorosis in a girl of 18, attended with the usual symptoms, but in a very high degree. The appetite more affected than I ever saw it. The relief from the nitrous acid was great, speedy, and permanent; the appetite and the florid complexion natural to the girl returned in ten days completely. I could never carry the medicine beyond 60 drops in the day.”

Mr. Home in a late pamphlet, recommends the nitrous acid, much diluted, as an application to indolent ulcers. (*Home on ulcers. 1797*). It is always desirable to know the qualities of substances; and the operation of the acid appears to be curious, though, after Mr. Baynton's publication on ulcers, the mere application of liquids would be egregious trifling.

I have said nothing of the application of nitrous acid, or kindred substances in the yaws, fivvens, and similar diseases. The inference from the foregoing cases and reflections, is too obvious to escape the slackest reasoner.

It remains therefore only to direct the mental eye of the reader towards those brilliant and spreading prospects, which medical investigation, guided by the light of philosophy, has recently discovered; and whatever be his rank in life, or occupation, to adjure him by the sympathy of his nature, to assist in rescuing thousands of sufferers from the fangs of disease and the nets of imposture, according to the plan delineated in the following

CIRCULAR

CIRCULAR LETTER.

SIR,

YOU probably know that Mr. Scot, of Bombay, was led by considerations, that need not be stated here, to try the nitrous acid in the venereal disease; that the experiment answered; and that it has been successfully imitated in England.

In above fifty cases, many of them picked for the worst, the Surgeons of the Royal Hospital at Plymouth have found this acid certain, expeditious, and infinitely milder, than mercury. Their mode of administration is extremely commodious. To a pint of water they add a drachm of strong nitrous acid, together with 4 or 6 ounces of simple syrup. This mixture is sucked through a glass tube. $1\frac{1}{2}$ or 2 drachms of the strong acid, so diluted, have proved an adequate dose for the day.

Mr. Cruikshank of Woolwich ingeniously substituted bodies of analogous constitution. He represents the oxygenated muriate of potash, as more powerful than nitrous acid. It produced an inflammatory state of the system.

What is here recapitulated, together with some suggestions, may be read at large in *Considerations on facitious airs*, parts IV. and V. *Johnson*; in *Two cases of Diabetes*. *Dilly*;

and in *Reports concerning the effects of nitrous acid, &c. Johnson*. Above 100 bad cases stand attested, as cured, beyond all reasonable doubt. Some unsuccessful trials are noticed in the last pamphlet.

The extraordinary power and mild action of the acid, with the proportion of failures, render a fuller induction of facts and testimonies highly desirable.—It is certain, that to establish the anti-venereal virtue of substances, not injurious to the constitution, would be giving a deadly blow to empirical imposture. It cannot have escaped you, that the pretensions of many quack medicines are rested on the occasional inefficacy of mercury, and an overcharged representation of its baneful effects.

By the co-operation of practitioners, a thousand cases might soon be collected. And it is hoped that you will not refuse your assistance to such an undertaking. The share I have had in conveying information to the public, very naturally led me to reflect on the speediest method of solving this problem; *how far the cure of lues can be justifiably entrusted to the nitrous acid in the first instance*. In consequence, I have taken the liberty of making the present application. I do not think that it can yet be deemed superfluous to collect more evidence, nor will the advantage of bringing the evidence together be disputed. There are persons, to whom every large design appears, by reason of its comprehensiveness, absurd. Others, I trust, will not condemn the idea of attempting to induce a large part of the medical profession, to unite in an enquiry of the highest interest.

Where the case prospers, the report should concisely state the symptoms, with the date and permanence of the cure. Appearances leading to a knowledge of the cause of failure should be noted. The nitrous acid (and the oxygenated muriate) will be found useful in various diseases. But as the collection here proposed, will be confined to syphilis, information on other subjects should be written separately.

If any profits accrue, they shall be divided among charitable establishments for venereal patients. On this account it will not, I hope, be thought improper to request that communications be transmitted, free of expence, to Mr. JOHNSON, Bookseller, 72, St. Paul's Church-Yard, London.

I do not wish that any reports should be forwarded before Jan, 1798. If by the end of February, the number shall suffice for publication, they shall be immediately printed; or else returned.

To render the task of editor as little disagreeable as possible, it is desired that all technical terms and quantities may be written at length, and the whole in a fair hand.

Sept. 5, 1797.

THOMAS BEDDOES.

Be pleased to communicate this letter to any Physician, Surgeon or Apothecary of your acquaintance.

Speedily will be published by the Editor,

AN ESSAY
ON THE EARLY SIGNS
AND
PREVENTION
OF
PULMONARY CONSUMPTION.



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